

Programmable DC Power Supply

Model 52912/52914



0~48VDC/2AMP/60W

Chroma 52912/52914 programmable DC power supplies are designed specifically for test applications that demand precision output voltage/current and tightly coupled measurement capabilities. Chroma 52912/52914 provides you a good return on investment. The versatile design and world-class performance of Chroma 52912/52914 make them ideal for a broad range of design and production applications in markets as diverse as communications, semiconductor, and components manufacturing.

Measurement Function

In operation, the measurement capabilities include quickly setting I/V and then measuring I/V automatically without processor intervention. 52912/52914 has hardware built sequence list that can execute command and store data in FIFO without processor action. With the tight integration of a Chroma 52912/52914, you'll get high speeds for high throughput and high measurement accuracy and repeatability for yield integrity.

Power Levels

The 52912/52914 Programmable power supplies provide two independent and isolated 60W(MAX) supplies, and each channel is programmable from 0-48VDC to a maximum of 2.0 Amps. The 52912/52914 include programmable current limit to protect critical UUT's from excessive current, output will automatically switch into constant current mode when limit is reached. For greater power or voltage applications, channels can be connected in series.

Input Power

To avoid excess power draw from the PXI backplane, the 52912 draws input power (+56VDC) via front panel connections. This approach not only minimizes power required from the backplane but also maintains complete isolation between backplane logic and power conversion circuitry for noise immunity. For applications where +56VDC is not available, Chroma 52912 provides an optional AC-DC adapter which allows the instrument to be operate from 100~240VAC mains. Chroma 52914 incorporates the AC-DC converter circuit on board. Universal power (100~240VAC) is applied to the front panel directly in order to produce the dual isolated programmable outputs.

Compliant to PXI and cPCI Standards

The 52912/52914 Programmable power supplies comply with the latest PXI Revision 2.0 specifications of the PXI System Alliance (PXISA) as well as the CompactPCI specifications as defined by the PCI Industrial Computer Manufacturing Group (PICMG). Thus, the 52912/52914 may be used in either PXI or CompactPCI mainframes.



KEY FEATURES

- Dual Isolated outputs; 0-48VDC/ 2A MAX./ 60W, programmable
- Direct Universal AC input via front panel (Model 52914)
- External Trigger function
- Programmable current limit
- Over voltage, over current and short circuit protection
- Remote Voltage Sense
- 16 Bit read back voltage and current at output
- Supplies can be connected in series

SPECIFICATIONS

Model	52912	52914
Dimensions	1-Slot, 10x16cm	3-Slot, 10x16cm
Output		
Voltage/Current/Power	Channel #1 : 0 ~ 48VDC, 2A MAX., 60W Channel #2 : 0 ~ 48VDC, 2A MAX, 60W	
Voltage Accuracy	0.5% of programmed value \pm 50mV	
Voltage setting resolution	12 Bits	
Line Regulation	0.1%	
Load Regulation	0.1% (10% to 90% load change)	
Transient Response (20MHz)	Peak transient less than 150mV and return to within 5% less than 2ms following 20% load change. (Test Condition: 24V@1.44A~1.8A, 48V@0.8A~ 1A) at 25°C	
Current Limit Accuracy	0.5% \pm 50mA (12 Bits Resolution)	
Read back	Voltage: \pm 0.2% of Reading + 60mV Current: \pm 0.5% of Reading + 10mA	
Rise Time	< 50 ms (10% ~ 90%)	
Efficiency	84% typical	
Measurement Function		
Maximum sampling rate	5K S/s of each channel	
Input Impedance	5k Ω	
Trigger sources	Software, external	
Buffer size	2K samples per channel	
Data transfers	Polling	
Sequence Function		
Trigger sources	Software, external	
Input Impedance	3.78k Ω	
Buffer size	256 command words per channel	
Input		
DC Input	Isolated + 56VDC (dual)	--
AC Input	100V ~ 240VAC, 50 or 60 Hz (Optional A529102)	100 ~ 240VAC, 50 or 60 Hz
Software API	<ul style="list-style-type: none"> VISA compatible via National Instrument's VISA 2.5 or above 20 Windows DLL's API 	
PCI Data BUS	PCI V2.2 compliant, 33MHz, 32 Bits	
Operating Temperature	0°C ~ 55°C	
Operating Humidity	10% ~ 90 % relative	
Storage Temperature	-30°C ~ 70°C	
Isolation		
Channel to Channel	500V	
Channel to Chassis	500V	
Standards	<ul style="list-style-type: none"> PXISA PXI 2.0 PICMG 2.0 R3.0 CompactPCI 	

ORDERING INFORMATION

52912 : PXI/cPCI Programmable DC Power Supply (DC Input)

52914 : PXI/cPCI Programmable DC Power Supply (AC Input)

A529102 : AC/DC Adapter (for Model 52912)

Developed and Manufactured by :

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